



IEI Integration Corp.
威強電工業電腦

SPECIFICATION FOR APPROVAL

IEI Part Number : 63040-010036-121-RS/GTC-63040-010036-121-RS

Description : ADAPTER,C6/S3P,WO/PFC,

2.5/5.5/7.5,180',1500mm

**Manufacturer /
Supplier :** FSP TECHNOLOGY CORP.

Mfr Model Name : FSP036-RBBN2

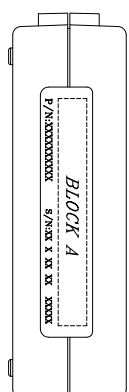
Mfr Part Number : 9NA0362306

Mfr Description : ADAPTER,C6/S3P,WO/PFC, 2.5/5.5/7.5,180',1500mm

RoHS or Halogen RoHS

Supplier



Mechanical Drawing (外觀/機構圖) 表單編號:7000P-011



全漢企業股份有限公司
FSP TECHNOLOGY INC.

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SPECIFICATION



ESD13004109

Released Date: 2014/07/24-10:18:43



全漢企業股份有限公司

FSP TECHNOLOGY INC.

SPECIFICATION

MODEL: FSP036-RBBN2 (36Watt)

| P.E | R/D | REV. |
|----------|----------|------|
| Zhang HB | Zhang HB | 02 |

History

2

Electrical Specification

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Electrical Specification

1. SCOPE

This specification describes a 36w power supplies intended for use in I.T.E applications. The AC input operates over a wide range that allows worldwide operation with no manual selection required. The Power Supply unit is external to the notebook application system.

1.1 Cooling

Free air convection is sufficient to meet the Rating specifications

2. ELECTRICAL SPECIFICATIONS

2.1 Input

| Parameter | Test Conditions | Min | Typ | Max | Units |
|---------------------------|--|--|---------|------|-------|
| Input Voltage Range | single Range. | 90 | 100/240 | 264 | Vac |
| Input Frequency Range | | 47 | 50/60 | 63 | Hz |
| Efficiency | Vin = 115V/230 VAC, | 86 | | | % |
| No Load Power Consumption | Vin = 115V/230 VAC, 60, 50 Hz. | | | 0.1 | Watts |
| Input Power Factor | Vin = 115V/230 VAC, 60, 50HZ | - | - | - | |
| Electric Strength | Hi-Pot | | | 1500 | VAC |
| Peak Inrush Current | Vin = 230 VAC (25°C Ambient, Cold and Hot Start). | Shall be less than the rating of adapter critical component (including rectifiers, fuse and current limiting device) | | | |
| Average Efficiency | (1) Warm Up The UUT shall be measured after operated at 100% of rated current output for at least 30 minutes. (2) Tested sequence Efficiency tests shall be conducted in sequence: ① 100% maximum load ② 75% maximum load ③ 50% maximum load ④ 25% maximum load | Average efficiency of 25%, 50%, 75% and 100% load shall be more than 87.5% tested at 115V/230Vac. | | | |



Electrical Specification

2.2 Output

| Parameter | Test Conditions | Min | Typ | Max | Units | |
|--------------------------------|--|-------|--------|--------------|-------|-----|
| Output Voltage Rating | ±5% Initial tolerance | 11.4 | 12 | 12.6 | VDC | |
| Output Power Rating | At typical voltage; 5°C to 40°C | | 36 | | Watts | |
| Average Output Current | At typical voltage; 5°C to 40°C | 0 | | 3.0 | A | |
| Output Voltage Line Regulation | under AC Input operating range | | | 0.5 | % | |
| Output Voltage Load Regulation | No load to rated load | | | 2.5 | % | |
| Ripple and Noise | 47uF/35V cap and 0.1uF ceramic cap on output, 20MHz BW | | | 300 | mVp-p | |
| Transient Load Response | Dynamic load condition | | | | VDC | |
| | I1(A) | I2(A) | Tmax | di/dt(mA/us) | | |
| | 0 | 1.5 | 10msec | ≥50 | | |
| | 1.5 | 3.0 | 10msec | ≥50 | | |
| | 0 | 3.0 | 10msec | ≥50 | | |
| Turn-On Delay | 100VAC, | | | | 3 | sec |



Electrical Specification

| Parameter | Test Conditions | Min | Typ | Max | Units |
|-----------------------------|--|-----|-----|-------|-------|
| Over Voltage Protection | Output voltage limit range Latch off | | | 19.5V | VDC |
| Over Current Protection | Output current limit range 90Vac~264Vac | | | 5.5 | A |
| Over Temperature Protection | No damage | | | | |
| Short Circuit Protection | Output power limit Auto-recovery | | | 5 | W |
| Overshoot | At power-up or power-down | | | 10 | % |
| Holdup Time | Rated Load, 100VAC, 12V +/- 5 % | 5 | | | mS |
| Rise Time | 5%~95% of output voltage | 2 | | 100 | mS |

2.3 Short Circuit Protection

The power supply has protection at short circuits conditions.

2.3.1 Short Circuit Recovery

The power supply output automatically recovers when the short circuit condition is removed.

2.4 Over Circuit Protection

The power supply has protection at over circuits conditions.

2.4.1 Over Circuit Recovery

The OCP shall limit the output current to 5.5 amperes by monotonically shutting down all voltage rails in the event of an over current condition. Auto recovery is required. The power supply shall be able to survive an OCP condition for an indefinite period of time without damage.



Electrical Specification

2.5 Output Voltage Protection Limit

When the output is outside the voltage output limit range, the power supply latches off and remains shutdown. The AC input must be cycled to restart. The power supply shall be able to survive an OVP condition for an indefinite period of time without damage.

2.6 Over temperature Protection

A temperature sensor and associated protection circuitry are installed inside the AC adapter to detect the case internal temperature and provide protection against damage to the AC adapter. If the power supply shuts down due to over temperature, the power supply latches off and remains shutdown. The AC input must be cycled to restart.

2.7 System Capacitive Load

The system load capacitance is 2200uF. And shall be capable of start up with a 2200uF load.

3. ENVIRONMENTAL

3.1 Temperatures and Humidity

| Parameter | Test Conditions | Min | Typ | Max | Units |
|-------------|---------------------|-----|-----|-----|-------|
| Temperature | Operating Range: | 0 | | +40 | °C |
| | Storage Range: | -20 | | +70 | °C |
| Cooling | Free Air Convection | N/A | N/A | N/A | |
| Humidity | Operating Range: | 20 | | 80 | % |
| | Storage Range: | 10 | | 90 | % |

3.2 Altitude

The Power Supply operates up to an altitude of 5000m above sea level.

3.3 Impact

The Power Supply withstands a drop from a height of 36 inches onto a concrete floor across the operating ranges of temperature and humidity. The Power Supply remains functional and the case will not crack or break. The number of units per drop = 1.



Electrical Specification

3.4 Shock and Vibration

Operation vibration shall be 0.5G`S peak, 10-60Hz, 3Axes, after test no abnormally to be noted. Non operation vibration with shipping container shall be 2G`S peak, 7-50Hz, 4G`S peak 50-500Hz, after test no abnormally to be found.

3.5 Drop-Test

Test height 100cm/6 faces, after drop test no function abnormally to be noted.

4. EMC

4.1 Electrostatic Discharge (ESD)

The Power Supply meets EN61000-4-2, Level 4 requirements.

4.2 Electrical Fast Transient Test (EFT)

The Power Supply meets IEC 61000-4-4/1995, Level 2 requirements.

4.3 Surge Immunity Requirement

The Power Supply meets IEC 61000-4-5, Level 3 requirements.

4.4 Dielectric Withstand Voltage (Hi-Pot)

Between AC input and secondary applied 1500Vac/ test time 1 minute.

4.5. ELECTROMAGNETIC COMPATIBILITY

The Power Supply meets EN55022/CISPR 22 (Class B),
FCC Part 15 (Class-B) with 6dB margin.

5. REGULATORY AGENCY APPROVALS

5.1 Certifications

Certification is to IEC60950.

5.2 Other Requirements

Complies with Energy Star 2.0 (Level V)

5.3 Leakage Current:

The AC leakage current is less than 250uA when adapter is connected to 264Vac/60Hz.

5.4 Insulation Resistance

The insulation resistance shall be not less than 20 M Ohm after application of 500VDC for 1 minute.



Electrical Specification

6. RELIABILITY

6.1 Mean Time Between Failure (MTBF)

The MTBF is calculated to be not less than 100,000 hours with 90% confidence at 25 °C.

6.2 Burn-In

The power supply is burned in at 40°C ambient temperature under nominal input and full rated load.

7. MECHANICAL

7.1 Mechanical Dimensions

L: 89.8mm

W: 37.8mm

H: 27.5mm



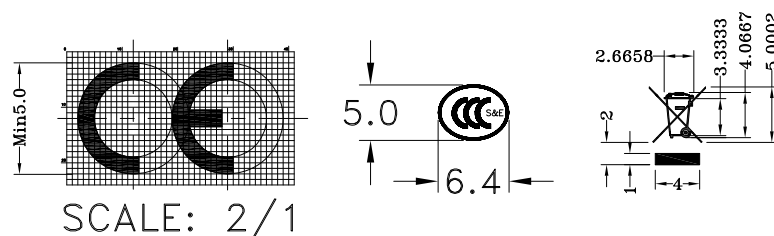
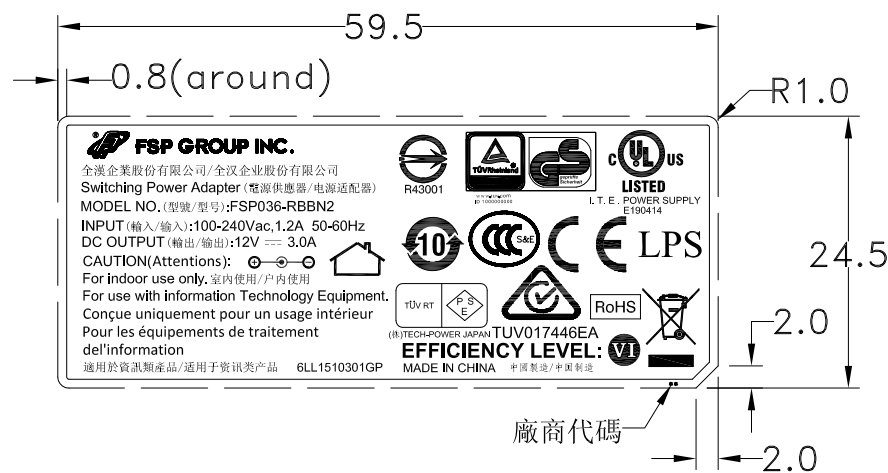
全漢企業股份有限公司
FSP GROUP FSP TECHNOLOGY INC.

P/N:6LL1510301GP

| | | | |
|--------------------|--|---------------|-------|
| MODEL:FSP036-RBBN2 | MAIN LABEL, FSP, FSP036-RBBN2, AS, BSMI, CCC (5K+熱帶), CE, PSE, TUV/GS, . . . , UL/cUL LISTED (E190414), PET 100# (WHITE)+半霧面, . . . , EFFICIENCY LEVEL:VI, WEEE, CHINA ROHS, 100-240V, 1.2A, 12V, . . . , RoHS, . . . , LPS, . . . , MADE IN CHINA | SHEET: 1 OF 1 | REV:1 |
| REV | 修改內容 | REV | 修改內容 |


注意事項:

1. 材質: PET 100# (WHITE)+半霧面, 黑底白字. 厚度: 0.15 ± 0.05 , #字背膠.
 2. LABEL MUST BE UL RECOGNIZED: PGDQ2 OR PGJI2, LABEL MUST BE CSA CERTIFIED.
 3. THE PLASTIC MATERIAL OF APPLICATION SURFACE FOR THIS LABEL IS PC.
 4. 印刷字大小、位置、內容詳見DRAWING
 5. 印刷必須清晰, 不得有斷線、模糊不清等不良現象
 6. 背膠耐溫 80°C 不會產生翹起, 起泡
 7. 未注公差 $\pm 0.2\text{mm}$
- 材質須符合“SPI環境管制物質技術標準 (SGP-0401)”



| | | | | |
|-----------------------|---------|-----------|---------|-------------|
| R&D (SH) | CHECKED | DESIGN BY | DRAWING | DATE |
| | | | WULONG | 18/ANOV/14' |
| INTERIOR COUNTERSING: | | | | |

Mechanical Drawing (外觀/機構圖) 表單編號:7000P-0111

| | |
|---|------------------|
|  | Ref. Certif. No. |
| | JPTUV-051184 |

**IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME**

**SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC**

CB TEST CERTIFICATE

CERTIFICAT D'ESSAI OC

Product
Produit

Switching Power Adapter

Name and address of the applicant
Nom et adresse du demandeur

FSP Group Inc.
No. 22, Jianguo E. Road
Taoyuan 330 Taiwan

Name and address of the manufacturer
Nom et adresse du fabricant

FSP Group Inc.
No. 22, Jianguo E. Road
Taoyuan 330 Taiwan

Name and address of the factory
Nom et adresse de l'usine

See additional page(s)

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

Input : 1) AC 100-240V; 1.5A; 50-60Hz; Class I
2) AC 100-240V; 1.2A; 50-60Hz; Class I
Output: refer to the test report.

Trademark (if any)
Marque de fabrique (si elle existe)

FSP

Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais constructeur

N/A

Model / Type Ref.
Ref. de type

1) FSP045-REBN2, FSP045-RABN2
2) FSP036-RBBN2

Additional information (if necessary may also be
reported on page 2)
Les informations complémentaires (si nécessaire,
peuvent être indiqués sur la 2^{ème} page)

For model differences, refer to the test report.

A sample of the product was tested and found
to be in conformity with
Un échantillon de ce produit a été essayé et a été
considéré conforme à la

IEC 60950-1:2005+A1
National differences see test report

As shown in the Test Report Ref. No. which forms part
of this Certificate
Comme indiqué dans le Rapport d'essais numéro de
référence qui constitue partie de ce Certificat


11033085 001

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification



TÜV Rheinland Japan Ltd.
Global Technology Assessment Center
4-25-2 Kita-Yamata, Tsuzuki-ku
Yokohama 224-0021 Japan
Phone + 81 45 914-3888
Fax + 81 45 914-3354
Mail: info@jpn.tuv.com
Web: www.tuv.com

Signature:


Best C.C. Chen

Date: 10.05.2013



Ref. Certif. No.

JPTUV-051184

PAGE 2 OF 2

1. ShenZhen HuiLi Electronics CO., LTD
Block C,
Building 4, 6, 7, 8, 9, 10, 11,
County 73, Xin'an, Bao'an,
Shenzhen, Guangdong, P.R. China
2. Zhonghan Electronics (Shenzhen)
Co., Ltd.
Building 2,3,4,10,
JuYuan Industrial Zone,
TangWei Village, FuYong Town, BaoAn District, ShenZhen City, P.R. China
3. Wuxi SPI Technology Co., Ltd.
No. 96, XinmeiRoad,
New District, Wuxi city, Jiangsu
P.R. China
4. ZHONGHAN SCIENCE &TECH CO.LTD
BLD5, JuYuan Industrial
TangWei Village, FuYong Town
BaoAn, District. ShenZhen City
P.R. China
5. Wuxi ZhongHan Technology Co., Ltd.
Block 106-E,
Wuxi Nation HI-TECH Industrial
Development Zone,
Wuxi City, Jiangsu, Province, P.R. China

Additional information (if necessary)
Information complémentaire (si nécessaire)

Report Ref. No.: 11033085 001

Date: 10.05.2013

Signature:

Best C. C. Chen

CERTIFICATE OF COMPLIANCE

Certificate Number 20130523-E190414A
Report Reference E190414-A551-UL
Issue Date 2013-MAY-23

Issued to: FSP GROUP INC
22 JIANGUO E RD
TAOYUAN CITY
330 TAIWAN

**This is to certify that
representative samples of**

POWER SUPPLIES, INFORMATION TECHNOLOGY
EQUIPMENT INCLUDING ELECTRICAL BUSINESS
EQUIPMENT

Switching Power Adapter

Models: FSP036-RBBN2, FSP045-REBN2,
FSP045-RABN2

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.


Standard(s) for Safety:

UL 60950-1-Information Technology Equipment - Safety -
Part 1: General Requirements.
CSA C22.2 No. 60950-1-07-Information Technology
Equipment - Safety - Part 1: General Requirements.

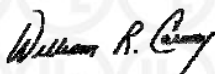
Additional Information:

See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Listing Mark for the US and Canada should be considered as
being covered by UL's Listing and Follow-Up Service meeting the appropriate requirements for US
and Canada.

The UL Listing Mark for the US and Canada generally includes: the UL in a circle symbol with "C" and
"US" identifiers:  the word "LISTED"; a control number (may be alphanumeric) assigned by UL;
and the product category name (product identifier) as indicated in the appropriate UL Directory.

Look for the UL Listing Mark on the product.



William R. Carney, Director, North American Certification Programs
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please
contact a local UL Customer Service Representative at www.ul.com/contactus



CERTIFICATE OF CONFORMITY



Equipment : Switching Power Adapter
Test Model No. : FSP036-RBBN2, FSP045-REBN2, FSP045-RABN2
Applicant : FSP Group Inc.
Test Report No. : CE130513D02



We, **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, declare that the equipment above has been tested in our facility and found compliance with the requirement limits of applicable standards. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate under the standards herein specified.

EN 55022:2010 + AC:2011, Class B

CISPR 22:2008, Class B

AS/NZS CISPR 22:2009 +A1:2010, Class B

EN 61000-3-2:2006 +A1:2009 +A2:2009

EN 61000-3-3:2008

EN 55024:2010

IEC 61000-4-2:2008 ED.2.0

IEC 61000-4-3:2010 ED.3.2

IEC 61000-4-4:2012 ED.3.0

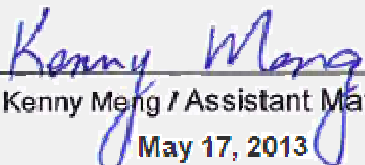
IEC 61000-4-5:2005 ED.2.0

IEC 61000-4-6:2008 ED.3.0

IEC 61000-4-8:2009 ED.2.0

IEC 61000-4-11:2004 ED.2.0

Notes: The above IEC basic standards are applied with latest version if customer has no special requirement
In accordance with the council directive 2004/108/EC


 Kenny Meng / Assistant Manager
 May 17, 2013



No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)

Tel: 886-2-26052180 Fax: 886-2-26051924

<http://www.bureauveritas-adt.com> E-Mail: service.adt@tw.bureauveritas.com

CERTIFICATE OF CONFORMITY



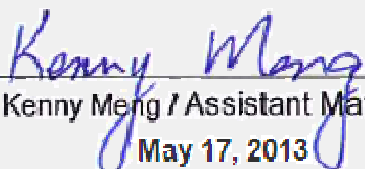
Equipment : Switching Power Adapter
Test Model No. : FSP036-RBBN2, FSP045-REBN2, FSP045-RABN2
Applicant : FSP Group Inc.
Test Report No. : FV130513D02

We, **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, declare that the equipment above has been tested in our facility and found compliance with the requirement limits of applicable standards. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate under the standards herein specified.

FCC Part 15, Subpart B, Class B

ICES-003:2012 Issue 5, Class B

ANSI C63.4-2009


Kenny Meng / Assistant Manager
May 17, 2013

No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City 244, Taiwan (R.O.C.)
Tel: 886-2-26052180 Fax: 886-2-26051924
www.bureauveritas-adt.com E-Mail: service.adt@tw.bureauveritas.com





FSP GROUP INC.

No. 22, Jianguo E. Rd., Taoyuan City, Taiwan, R.O.C.

TEL: +886 3 375 9888 FAX: +886 3 375 6966

CE Declaration of Conformity

Manufacturer:

Name: FSP Group Inc.

Address: No. 22, Jianguo E. Rd., Taoyuan City, Taiwan, R.O.C.

Declares that :

Product Name: Switching Power Adaptor

Model Number: FSP045-REBN2, FSP045-RABN2, FSP036-RBBN2

Complies with the following:

Standards

IEC 60950-1:2005+A1

EN 60950-1: 2006+A11+A1+A12

EN 55022:2010

EN 55024:2010

IEC 61000-3-2:2005+ A1+A2

EN 61000-3-2:2006+ A1+A2

IEC 61000-3-3:2008

EN 61000-3-3:2008

Directives

2006/95/EC(Low Voltage Directive)

2004/108/EC(EMC Directive)

Commission Regulation

(EC) No 278/2009

EN50563:2011

2009/125/EC (ErP Directive)

EN 50581: 2012

2011/65/EU: The use of certain
hazardous substances in electrical and
electronic equipment
Directive 2011/65/EU (Recasts and
supersedes 2002/95/EC)

Signature: Allen Cheng

Print Name: Allen Cheng

Title: President

Date: 9.18.2013

Place: Taoyuan, Taiwan



Zertifikat Certificate

Zertifikat Nr. Certificate No.
S 50254688

Blatt Page
0001

| Ihr Zeichen Client Reference | Unser Zeichen Our Reference | Längstens gültig bis | Latest expiration date (day/mo/yr) |
|------------------------------|-----------------------------|----------------------|---------------------------------------|
| KY SFA13014152 | ZTW1-CCH- 10041381 001 | 14.05.2018 | |

Genehmigungsinhaber License Holder
FSP Group Inc.
No. 22, Jianguo E. Road
Taoyuan 330
Taiwan

Fertigungsstätte Manufacturing Plant
ShenZhen HuiLi Electronics CO., LTD
Block C,
Building 4、6、7、8、9、10、11、
County 73, Xin'an, Bao'an,
Shenzhen, Guangdong
P.R. China

Prüfzeichen Test Mark



Geprüft nach Tested acc. to

EN 60950-1:2006+A11+A1+A12
ZEK 01.4-08/11.11

| Zertifiziertes Produkt (Geräteidentifikation) | Lizenzentgelte - Einheit |
|---|--------------------------|
| Certified Product (Product Identification) | License Fee - Unit |

Schaltnetzteil (Switching Power Adapter)

| | | |
|--|------------------------|---|
| Bezeichnung (Type Designation) | : FSP036-RBBN2 (FSP) | 8 |
| Nennspannung (Rated Voltage) | : AC 100-240V, 50-60Hz | |
| Nennstrom (Rated Current) | : 1.2A | |
| Ausgang (Output) | : DC 12V/3.0A | |
| Max. Betriebshöhe (Max. Operating Altitude) | : 5000m | |
| max. Umgebungstemperatur (max. Ambient Temperature) | : 40°C | |
| Schutzklasse (Protection Class) | : I | |

Hinweis: Dieses Netzgerät ist geprüft und erfüllt die Anforderungen nach Abschnitt 2.5 als Stromquelle mit begrenzter Leistung. (Remark: The equipment is also tested and complies with sub-clause 2.5 as limited power source.)

8

ANLAGE (Appendix): 1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Produkt und Fertigungsstätte erfüllen § 20 und § 21 des Produktsicherheitsgesetzes.

This certificate is based on our Testing and Certification Regulation.
Product and production fulfill par § 20 and § 21 of the Product Safety Law.

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

Tel.: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com
Fax: (+49/221)8 06 - 39 35 http://www.tuv.com/safety

Ausstellungsdatum Date of Issue : 15.05.2013 (day/mo/yr)

Zertifizierungsstelle

[Signature]
Dipl.-Ing. F. Stöckel



Zertifikat Certificate

Zertifikat Nr. Certificate No.
S 50254688

Blatt Page
0002

| Ihr Zeichen Client Reference | Unser Zeichen Our Reference | Längstens gültig bis Latest expiration date (day/mo/yr) |
|-------------------------------------|------------------------------------|--|
| KY SFA13014152 | ZTW1-CCH- 10041381 001 | 14.05.2018 |

Genehmigungsinhaber License Holder
FSP Group Inc.
No. 22, Jianguo E. Road
Taoyuan 330
Taiwan

Fertigungsstätte Manufacturing Plant
ShenZhen HuiLi Electronics CO., LTD
Block C,
Building 4、6、7、8、9、10、11、
County 73, Xin'an, Bao'an,
Shenzhen, Guangdong
P.R. China

Prüfzeichen Test Mark**Geprüft nach Tested acc. to**

EN 60950-1:2006+A11+A1+A12
ZEK 01.4-08/11.11

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Schaltnetzteil (Switching Power Adapter)

wie Blatt (as page) 01

Ergänzung
(Addition)

| | | |
|-----------------------------------|--|--------|
| Bezeichnung (Type Designation) | : 1) FSP045-REBN2 (FSP) 2) FSP045-RABN2 (FSP) | 1 1 |
| Nennspannung (Rated Voltage) | : AC 100-240V, 50-60Hz | |
| Nennstrom (Rated Current) | : 1.5A | |
| Ausgang (Output) | : 1) DC 19V/2.37A 2) DC 24V/1.875A | |

Hinweis : Dieses Netzgerät ist geprüft und erfüllt die Anforderungen nach Abschnitt 2.5 als Stromquelle mit begrenzter Leistung. (Remark : The equipment is also tested and complies with sub-clause 2.5 as limited power source.)

ANLAGE (Appendix): 1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Produkt und Fertigungsstätte erfüllen § 20 und § 21 des Produktsicherheitsgesetzes.
This certificate is based on our Testing and Certification Regulation.
Product and production fulfill par § 20 and § 21 of the Product Safety Law.

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg
Tel.: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com
Fax: (+49/221)8 06 - 39 35 http://www.tuv.com/safety

Ausstellungsdatum Date of Issue : 15.03.2013 (day/mo/yr)

Zertifizierungsstelle



Zertifikat Certificate

Zertifikat Nr. Certificate No.
S 50254688

Blatt Page
0003

| Ihr Zeichen Client Reference | Unser Zeichen Our Reference | Längstens gültig bis | Latest expiration date |
|-------------------------------------|------------------------------------|-----------------------------|-------------------------------|
| KY SFA13014152 | ZTW1-CCH- 10041381 001 | 14.05.2018 | (day/mo/yr) |

Genehmigungsinhaber License Holder
FSP Group Inc.
No. 22, Jianguo E. Road
Taoyuan 330
Taiwan

Fertigungsstätte Manufacturing Plant
Wuxi SPI Technology Co., Ltd.
No. 96, Xinmei Road,
New District, Wuxi city, Jiangsu
P.R. China

Prüfzeichen Test Mark

www.tuv.com
ID 1000000000

Geprüft nach Tested acc. to

EN 60950-1:2006+A11+A1+A12
ZEK 01.4-08/11.11

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Schaltnetzteil (Switching Power Adapter)

wie Blatt (as page) 01

Ergänzung (Addition)

Fertigungsstätte : siehe oben
(Factory) (see above)

ANLAGE (Appendix): 1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Produkt und Fertigungsstätte erfüllen § 20 und § 21 des
Produktsicherheitsgesetzes.

*This certificate is based on our Testing and Certification Regulation.
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Product Safety Law.*

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

Tel.: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com
Fax: (+49/221)8 06 - 39 35 http://www.tuv.com/safety

Ausstellungsdatum Date of Issue : 15.05.2013 (day/mo/yr)

Zertifizierungsstelle



Dipl.-Ing. F. Stölzel



Certificate Number: TUV017446EA

CERTIFICATE OF APPROVAL

Authorised marking: TUV017446EA

This is to certify that TÜV Rheinland Australia Pty Ltd as accredited by JAS-ANZ in accordance with ISO/IEC Guide 65 has examined for compliance with certification standards, the electrical equipment described hereunder and authorises the certificate holder to affix the above mentioned mark to products of the same type; or the Regulatory Compliance Mark (RCM) provided that the requirements of all relevant parts of AS/NZS 4417 applicable to the article are fulfilled

CERTIFICATE HOLDER: FSP Group Inc.
No. 22, Jianguo E. Road,
Taoyuan 330
Taiwan

DESCRIPTION OF EQUIPMENT

Declared class: POWER SUPPLY OR CHARGER

Product: Switching Power Adapter

Trade Name / Manufacturer: 

Model Number: FSP036-RBBN2

Ratings: Input: AC 100-240V~; 1.2A; 50-60Hz
Output: 12Vdc/3.0A, Class I, IPX0

Standard: AS/NZS 60950.1:2011+A1

Issue Date: 22/10/2014

Expiry Date: 22/10/2019

Signed for and on behalf of TÜV Rheinland Australia Pty Ltd

A blue ink signature, likely of a representative of TÜV Rheinland Australia Pty Ltd, written over a horizontal line.



Acc. No. Z2870404AA
www.jas-anz.org/register

TÜV Rheinland Australia Pty Ltd
182 Dougherty Road, Heidelberg West VIC 3081
Phone: +61 (3) 9450 1400
Email: certification@au.tuv.com
Website: www.au.tuv.com



AUSTRALIAN GEMS REGULATOR

1 October 2014

FSP Group Inc
Kael Amif
No. 22, Jianguo E.Rd.,
Taoyuan City, Taiwan, 330
Other

Dear Sir/Madam,

NOTICE OF REGISTRATION UNDER THE *GREENHOUSE AND ENERGY MINIMUM STANDARDS ACT 2012* (the Act)

I refer to your application to register a model of a Greenhouse and Energy Minimum Standards (GEMS) product under section 41 of the Act. Your application has been accepted, and the model detailed below has been registered under section 43 of the Act.

| Registration No | Product Type | Brand Name | Model | Date of Registration | Record ID |
|-----------------|-----------------------|------------|--------------|----------------------|-----------|
| APS2017 | External Power Supply | FSP | FSP036-RBBN2 | 1 October 2014 | 84679 |

This registration is valid for a maximum of five years from the date of registration. Registration of the model remains in force until the earliest of the following:

- a. The end of the model's maximum registration term;
- b. The GEMS Determination against which the model is registered is replaced, and the model does not comply with the requirements of the replacement Determination; or
- c. The registration is cancelled under section 54 of the Act.

As the registrant you are responsible for ensuring the model continues to meet the energy performance claimed in your application, and that it complies with the relevant GEMS Determination. Compliance with the Act is actively monitored under the Equipment Energy Efficiency (E3) Program, through a national check-testing program and other methods. Significant penalties, including the cancellation of registration, may apply for non-compliance.

It is also your responsibility to keep up-to-date the contact details of those persons listed on your application (including Authorised Representatives). Further information is available at www.energyrating.gov.au.

Yours sincerely,

Carl Porritt

**Authorised Delegate
for the Australian GEMS Regulator**

GEMS Regulator Equipment Energy Efficiency

Registration #84679

APS2017

Section 1 - Overview

Models

| | |
|--------------|--------------|
| Model Number | FSP036-RBBN2 |
| Brand | <u>FSP</u> |

Administrative Details

| | |
|--------------------------|-----------------------------------|
| Status | Approved |
| Product Class | Class 1 |
| Registration Number | APS2017 |
| Regulatory Authority | Australian Regulator |
| Regulator Terms Accepted | Yes |
| Submitted Date | Oct. 1, 2014 |
| Registration Date | Oct. 1, 2014 |
| Expiry Date | Oct. 1, 2019 |
| Date Approved | Oct. 1, 2014 |
| Archive Status | Not Archived |
| Suspension Status | Not Suspended |
| Approval Certificate | Click to download |

Registration Type

| | |
|----------------------------|--|
| Appliance Type | External Power Supply (PS) |
| Determination | Greenhouse and Energy Minimum Standards (External Power Supplies) Determination 2012 |
| Type of EPS application | Single model/s |
| Application is For | High Efficiency 2008 (Mark V) |
| Model / Test Configuration | One Model With One Test |

Applicant Details

| | |
|-----------------------------|---|
| Applicant ID | 103381 |
| Applicant Organization Name | FSP Group Inc |
| Applicant ABN | - |
| Applicant Contact Name | Mike Lin |
| Applicant Address | No. 22, Jianguo E.Rd., Taoyuan City, Taiwan, 330 Other |
| Applicant Role | The applicant is the manufacturer of the product to be registered |

Payment

| | |
|-----------------------|------------------------------------|
| Payment Status | Paid |
| Payment Method | On-line payment via (Reserve Bank) |
| Payment Amount | 440.0 |
| Payment Date | Oct. 1, 2014 |

Administrative Contact

| | |
|---------------------|---|
| Name | Kael Amif |
| Organization | AMIF Pty Ltd |
| Job Title | Manager |
| Phone Number | 02-46476680 |
| Fax Number | Not supplied |
| Email | kael.amif@gmail.com |
| Address | 138 Waterworth Drive Mount Annan, NSW, 2567 Australia |

Technical Contact

| | |
|---------------------|--|
| Name | Mike Lin |
| Organization | FSP Group Inc. |
| Job Title | Manager |
| Phone Number | +886 3 3759888(1762) |
| Fax Number | Not supplied |
| Email | mike@fsp-group.com.tw |
| Address | No. 22, Jianguo E.Rd., Taoyuan City,, Taiwan, 330 Taiwan |

Accounts Payable Contact

As for administrative contact

Information for Public Website

| | |
|-----------------------------|---------------|
| Availability Status | Unavailable |
| Date First Available | Oct. 15, 2014 |
| Date Available Until | April 1, 2016 |
| Publication Status | Published |
| Publication Date | Oct. 1, 2014 |
| Product Images | None Supplied |
| Product Website | None supplied |
| User Manual | None supplied |

Section 2 - Product Details

Models

| | |
|---------------------|--------------|
| Model Number | FSP036-RBBN2 |
| Brand | <u>FSP</u> |

| Manufacturer | |
|-------------------------|--|
| Company Name | FSP Group Inc. |
| ABN | Not supplied |
| Address | No.22, Jianguo E. Rd., Taoyuan City, Taoyuan, 330 Taiwan |
| Contact Name | Mike Lin |
| Company Phone | 886 3 3759888(1762) |
| Company Fax | 886 3 3756966 |
| Company Email | mike@fsp-group.com.tw |
| Company Website | Not Supplied |
| Manufacturing Countries | Taiwan |

| Availability | |
|----------------------------|---------------|
| Date of First Availability | Oct. 15, 2014 |
| Selling Countries | Australia |
| | Fiji |
| | New Zealand |

| Date of Manufacture | |
|-------------------------|--------------|
| Method of Determination | No date mark |

| Appliance Details | |
|---|--------------------------|
| Product configuration | AC-DC |
| Nameplate Image | attachments/label_54.JPG |
| Nameplate input frequency range: Minimum: | 50.0 Hz |
| Nameplate input frequency range: Maximum: | 60.0 Hz |
| Nameplate input voltage range: Minimum | 100.0 V |
| Nameplate input voltage range: Maximum | 240.0 V |
| Output voltage check | False |

Additional Nameplate Image Files

| | |
|--|--|
| | |
|--|--|

Model Details

Please provide information common to all models:

| | |
|---------------------------|--------|
| Nameplate output voltage: | 12.0 V |
| Nameplate output power: | 36.0 W |

Please provide information specific to each model:

| | |
|---------------------------|--------------|
| Brand name: | FSP |
| Model number: | FSP036-RBBN2 |
| Nameplate output voltage: | V |
| Nameplate output power: | W |

Test Results

| | |
|---|---------|
| Nameplate output voltage: Minimum | 12.0 V |
| Nameplate output voltage: Maximum | 12.0 V |
| Nameplate output power: Minimum | 36.0 W |
| Nameplate output power: Maximum | 36.0 W |
| No load input power: Minimum: | 0.06 W |
| No load input power: Maximum: | W |
| Average active mode efficiency: Minimum: | 87.94 % |
| Average active mode efficiency: Maximum: | % |

Section 3 - Test Details

Test Report Information

| | |
|-----------------------------------|---------------------------------|
| Is a test report provided? | Yes - a test report is provided |
| Test Report Type | None |
| Test Standard Used | AS/NZS 4665.1:2005 |
| Test Report Notes | None provided |

Test Laboratory

| | |
|-----------------------------|---|
| Laboratory Name | FSP Group Inc. |
| Laboratory Type | Own Lab |
| Accreditation Type | Other (please specify) |
| Accreditation Number | TAF |
| Address | No. 22 Jianguo E. Road, Taoyuan city, Taiwan Taiwan |

Test Report(s)

| | |
|--------------------------------|----------------|
| Report Number | V140527 |
| Report Signatory | Jason Wei |
| Test Date | Sept. 12, 2014 |
| Test Unit Serial Number | V140527-3 |
| Test Report File | Supplied |



經濟部標準檢驗局

BUREAU OF STANDARDS METROLOGY AND INSPECTION
MINISTRY OF ECONOMIC AFFAIRS



商品驗證登錄證書

CERTIFICATE OF THE REGISTRATION OF PRODUCT CERTIFICATION

證書號碼： CI433060013772 號 A1

Certificate No.

茲據 全漢企業股份有限公司

申請驗證登錄，經審查結果符合規

定，准予登錄並使用商品安全標章及識別號碼：

R43001

。其登錄事項如下：

The application made by

for Registration of Product

Certification has been reviewed and found to be in compliance with related regulations. Therefore, registration is granted with the

Product Safety Mark and the Identification No.

R43001

. Details of the registration are follows :

申請人：全漢企業股份有限公司

統一編號：84239055

Applicant

Uniform No.

地址：桃園縣桃園市建國東路22號

Address

生產廠場：詳如附表

Factory

廠址：詳如附表

Factory Address

商品種類名稱：

Type/name of product

商品分類號列：8504.40.20.00.3

C. C. C Code

中文名稱：電源供應器

Chinese name

英文名稱：Switching Power Adapter

English name

型式：FSP036-RBBN2

Type

系列型式：空白

Series of the type

依據標準：CNS13438 (95年完整版)、CNS14336-1 (99年版)

Standards

標準檢驗局或所屬分局發證（發證地址：100臺北市中正區濟南路1段4號）
（本證書經驗證機關使用鋼印後生效）

This certificate is issued by the BSMI. (No. 4, Sec. 1, Jinan Rd., Zhongzheng Dist., Taipei City 100, Taiwan)

(This certificate will become effective only when stamped with the BSMI seal.)

| | | | | | | |
|-------------------|------|--------|----|---------|----|-------|
| 登錄日期：中華民國 | 103 | 年 | 10 | 月 | 31 | 日 |
| Registration Date | 2014 | (year) | 10 | (month) | 31 | (day) |
| 本證書有效期限至 | 106 | 年 | 10 | 月 | 30 | 日 |
| Expiration Date | 2017 | (year) | 10 | (month) | 30 | (day) |
| 發證日期：中華民國 | 103 | 年 | 11 | 月 | 04 | 日 |
| Date of issue | 2014 | (year) | 11 | (month) | 04 | (day) |

註1：持本證書進口驗證登錄商品時，進口人須與本證書名義人相同。

註2：次年度商品驗證登錄年費繳納期限為當年11月30日，逾期未繳納者，經限期繳納屆期未繳納，即依商品檢驗法第42條第7款規定廢止驗證登錄，並自次年度1月1日起生效。

經濟部標準檢驗局
BUREAU OF STANDARDS METROLOGY AND INSPECTION
MINISTRY OF ECONOMIC AFFAIRS

商品驗證登錄證書
CERTIFICATE OF THE REGISTRATION OF PRODUCT CERTIFICATION

證書號碼： CI433060013772 號 A1
Certificate No.

生產廠場： 1. 無錫全漢科技有限公司
Factory： 江蘇省無錫市新區新梅路96號

2. 深圳輝力電子有限公司
深圳市寶安區新安街道73區C4、C6、C7、C8、C9、C10、C11廠房（在寶安區74區怡園路5185號廠房A3設有經營場所從事經營活動）
3. 深圳市眾漢科技有限公司福永廠
廣東省深圳市寶安區福永鎮塘尾村聚源工業區5棟
4. 無錫仲漢科技有限公司
江蘇省無錫市國家高新技術產業開發區106-E號地塊
5. 仲漢電子(深圳)有限公司
深圳市寶安區福永街道塘尾村聚源工業區第2, 3, 4, 10棟

(以下空白)



經濟部標準檢驗局

BUREAU OF STANDARDS METROLOGY AND INSPECTION
MINISTRY OF ECONOMIC AFFAIRS

商品驗證登錄證書

CERTIFICATE OF THE REGISTRATION OF PRODUCT CERTIFICATION

證書號碼： CI433060013772 號 00

Certificate No.

茲據

全漢企業股份有限公司

定，准予登錄並使用商品安全標章及識別號碼：

The application made by

Certification has been reviewed and found to be in compliance with related regulations. Therefore, registration is granted with the

Product Safety Mark and the Identification No.

R43001

. Details of the registration are follows :

申請驗證登錄，經審查結果符合規

R43001

。其登錄事項如下：

for Registration of Product

申請人：全漢企業股份有限公司

Applicant

統一編號：84239055

Uniform No.

地址：桃園縣桃園市建國東路22號

Address

生產廠場：詳如附表

Factory

廠址：詳如附表

Factory Address

商品種類名稱：

Type/name of product

商品分類號列：8504.40.20.00.3

C.C.C Code

中文名稱：電源供應器

Chinese name

英文名稱：Power Adapter

English name

型 式：FSP036-RBBN2

Type

系列型式：空白

Series of the type

依據標準：CNS14336-1 (099/09/30年版)、CNS13438 95年完整版

Standards

標準檢驗局或所屬分局發證（發證地址：100臺北市中正區濟南路1段4號）
（本證書經驗證機關使用鋼印後生效）

This certificate is issued by the BSMI. (No.4, Sec. 1, Jinan Rd., Zhongzheng Dist., Taipei City 100, Taiwan)

(This certificate will become effective only when stamped with the BSMI seal.)

| | | | | | | |
|-------------------|------|--------|----|---------|----|-------|
| 登錄日期：中華民國 | 103 | 年 | 10 | 月 | 31 | 日 |
| Registration Date | 2014 | (year) | 10 | (month) | 31 | (day) |
| 本證書有效期限至 | 106 | 年 | 10 | 月 | 30 | 日 |
| Expiration Date | 2017 | (year) | 10 | (month) | 30 | (day) |
| 發證日期：中華民國 | 103 | 年 | 10 | 月 | 31 | 日 |
| Date of issue | 2014 | (year) | 10 | (month) | 31 | (day) |

註1：持本證書進口驗證登錄商品時，進口人須與本證書名義人相同。

註2：次年度商品驗證登錄年費繳納期限為當年11月30日，逾期未繳納者，經限期繳納屆期未繳納，即依商品檢驗法第42條第7款規定廢止驗證登錄，並自次年度1月1日起生效。

經 濟 部 標 準 檢 驗 局

BUREAU OF STANDARDS METROLOGY AND INSPECTION
MINISTRY OF ECONOMIC AFFAIRS

商 品 驗 證 登 錄 證 書

CERTIFICATE OF THE REGISTRATION OF PRODUCT CERTIFICATION

證書號碼： CI433060013772 號 00

Certificate No.

生產廠場： 1. 仲漢電子(深圳)有限公司
Factory： 深圳市寶安區福永街道塘尾村聚源工業區第2, 3, 4, 10棟

2. 無錫全漢科技有限公司
江蘇省無錫市新區新梅路96號

3. 無錫仲漢科技有限公司
江蘇省無錫市國家高新技術產業開發區106-E號地塊

4. 深圳輝力電子有限公司
深圳市寶安區新安街道73區C4、C6、C7、C8、C9、C10、C11廠房
(在寶安區74區怡園路5185號廠房A3設有經營場所從事經營活動)

5. 深圳市眾漢科技有限公司福永廠
廣東省深圳市寶安區福永鎮塘尾村聚源工業區5棟

(以下空白)



全漢企業股份有限公司
FSP TECHNOLOGY INC.

台灣桃園市建國東路22號 統一編號：84239055
No. 22, Jianguo East Road., Taoyuan City, Taiwan, R.O.C.
TEL: +886-3-375-9888 Website: www.FSP-group.com
FAX: +886-3-375-6986 Email: sales@fsp-group.com.tw

FSP Green Product Declaration

We hereby guarantee that our power supply(part number listed below) are in compliant with RoHS directive "(2002/95/EC),
WEEE directive (2002/96/EC)" and other national and international statutory requirements.

We hereby conform and report the material and amount of "Environment of hazardous substance" in the concern product and part
as listed below :

| Part name | FSP036-RBBN2/9NA0362306 | |
|-----------|---------------------------------------|-----------------------------------|
| Item | Substance/Material | Contain ppm |
| 1 | Cadmium and compounds | <100ppm |
| 2 | Lead and compounds | <1000ppm |
| | | The RoHS Exemption *:Not required |
| 3 | Mercury and compounds | <1000ppm |
| 4 | Chrome(VI) and compounds | <1000ppm |
| 5 | Polybrominated biphenyls (PBBs) | <1000ppm |
| 6 | Polybrominated diphenylethers (PBDEs) | <1000ppm |
| end | | |
| | | |
| | | |
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| | | |
| | | |
| | | |
| | | |

Remark:

1. The RoHS Exemption*: such as Leaded glass used in electronic components ; Lead (Pb) in high melting temperature type solders; Lead (Pb) in electronic ceramic parts and Lead (Pb) in Steel Alloys (0.35% or 3500 PPM), Aluminum Alloys (0.4% or 4000PPM) or Copper Alloys (incl. bronzes, brasses, 4.0% or 40,000 PPM). 2. N.D=Not detected.

AUTHORIZED SIGNATURE:

FSP Technology Inc.
Date: 2014/9/24

